Preliminary Drainage Analysis

Project Name: IMMANUEL

PCSMP Number: TBD

Subdivision NEW HORIZON SUBDIVISION, REPLAT 2

Total Acreage: 21.67

Acreage Draining to Basins: 21.67 Acres

Drainage Treatment Summary

The project is located at the Southwest corner of College Road and Interstate 80. This drainage study is for Lots 1 thru 36 and Outlots A thru C, New Horizon Subdivision, Replat 2. The existing site is identified as Straight Row Crops in good condition. There are three (3) existing drainage basins in the proposed development which overland flow to the three discharge locations identified on the existing drainage plan. The stormwater in Drainage Basin(s) EX-A sheet flows into College road where it is picked up via curb and area inlets and conveyed by the existing public storm sewer system. Drainage Basin(s) EX-B is the largest basin in the project development. Runoff in basin EX-B sheet flows to the southwest towards discharge location B to an existing drainage swale. Drainage Basin EX-C1 consist of the remaining south portion of the development. Runoff in this basin sheet flows southwest towards discharge location C. All of the basins shown on the existing drainage plan eventually discharge into nearby Mosquito Creek. The proposed site drainage philosophy will generally match that of the existing flow patterns. However, the area draining to each basin will be slightly modified. In the post-developed condition, most of Lots 1 thru 4 will be conveyed via private storm inlets and storm sewer to different water quality treatment ponds that eventually covey the stormwater to a planned regional detention pond. The remaining lots 5-36 have public storm sewer inlets that discharge into the regional detention pond. Stormwater will be treated and detained in the regional pond and limit the discharges as described in the Statewide Urban Design and Specifications.

Private storm sewer will convey on- and off-site runoff to the proposed on-site pond(s) which will treat and detain the stormwater. The detention basins will not account for the water quality treatment volume or detention of the off-site runoff draining to the detention pond(s), but will allow for off-site run-on to pass through downstream.

Please refer to the attached exhibits for further information.